

**DEPARTMENT OF
APPLIED MATHEMATICS**

**2001
Faculty Publications
and Presentations**

PUBLICATIONS/PRESENTATIONS

JOURNAL PAPERS

Fahroo, F. and Ross, I.M., "A Second Look at Approximating Differential Inclusions," *Journal of Guidance, Control and Dynamics*, Vol. 24, No. 1, pp. 131-133, 2001.

Fahroo, F. and Ross, I.M., "Costate Estimation by a Legendre Pseudospectral Method," *Journal of Guidance, Control and Dynamics*, Vol. 24, No. 2, pp. 270-277, 2001.

Gordis, J.H. and Neta, B., "Fast Transient Analysis for Locally Nonlinear Structures by Recursive Block Convolution," *ASME Journal of Vibrations and Acoustics*, Vol. 123, pp. 545-547, 2001.

Kaminer, I., Kang, W., Yakimenko, O. and Pascoal, A.M., "Application of Nonlinear Filtering to Navigation System Design Using Passive Sensors," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 37, pp. 158-172, 2001.

Kang, W., Sparks, A. and Banda, S., "Coordinated Control of Multi-Satellite Systems," *AIAA Journal of Guidance, Control and Dynamics*, Vol. 24, No. 2, pp. 360-368, 2001.

Knorr, J.B. and Neta, B., "Plotting Circularly Polarized Field Patterns Using Processed NEC 4 Output Files," *Applied Computational Electromagnetic Society Newsletter*, Vol. 16, No. 2, pp. 26-33, 2001.

CONFERENCE PUBLICATIONS

Chang, D.E., Kang, W. and Krener, A.J., "Normal Forms and Bifurcations of Control Systems," *Proceedings of the IEEE Conference on Decision and Control*, Sydney, Australia, 12-15 December 2000.

Hamzi, B. and Kang, W., "Resonant Terms in a Class of Systems with Stationary Bifurcation," *Proceedings of the IEEE Conference on Decision and Control*, Orlando, FL, 4-7 December 2001.

Hamzi, B., Kang, W. and Barbot, J.P., "On the Control of Hopf Bifurcations," *Proceedings of the IEEE Conference on Decision and Control*, Sydney, Australia, 12-15 December 2000.

Kang, W. and Song, M., "Manufacturing Planning Based on Information Feedback," *Proceedings of the 6th International Conference on Control, Automation, Robotics and Vision*, Singapore, 5-8 December 2000.

Kang, W., Xi, N. and Sparks, A., "Theory and Applications of Formation Control in a Perceptive Referenced Frame," *Proceedings of the IEEE Conference on Decision and Control*, Sydney, Australia, 12-15 December 2000.

Kang, W., "Normal Forms, Invariants and Bifurcations of Nonlinear Control Systems," *Proceedings of the 3rd Workshop of Nonlinear Control Network, Bifurcation and Control*, Kloster Irsee, Germany, 1-3 April 2001.

Kang, W., Yeh, H. and Sparks, A., "Coordinated Control of Relative Attitude for Satellite Formation," *Proceedings of the AIAA Guidance, Navigation, and Control Conference*, 6-9 August 2001.

Nelson, E., Sparks, A. and Kang, W., "Coordinated Nonlinear Tracking Control for Satellite Formations," *Proceedings of the AIAA Guidance, Navigation, and Control Conference*, 6-9 August 2001.

Neta, B. and Ilan-Lipowski, Y., "A New Scheme for Trajectory Propagation," *Proceedings AIAA/AAS Astrodynamics Specialist Conference*, Quebec City, Quebec, Canada, Paper Number AAS 01-446, 31 July-3 August 2001.

PUBLICATIONS/PRESENTATIONS

Ross, I.M., Yan, H. and Fahroo, F., "A Curiously Outlandish Problem in Orbital Mechanics," ASS/AIAA Astrodynamics Specialist Conference, Paper AAS 01-430, Quebec City, Quebec, Canada, 30 July–22 August 2001.

Ross, I.M. and Fahroo, F., "A Pseudospectral Transformation of the Covectors of Optimal Control Systems," *Proceedings of the First IFAC/IEEE Symposium on System Structure and Control*, Prague, Czech Republic, August 2001.

Ross, I.M. and Fahroo, F., "Convergence of Pseudospectral Discretizations of Optimal Control Problems," *Proceedings of the Fortieth Conference on Decision and Control*, Orlando, FL, December 2001.

Yan, H., Fahroo, F. and Ross, I. M., "Optimal Feedback Control Laws by Legendre Pseudospectral Approximations," *Proceedings of the American Control Conference 2001*, Arlington, VA, June 2001.

Xiao, M. and Kang, W., "Bifurcation Control Using Integral Averaging Method," *Proceedings of the IEEE Conference on Decision and Control*, Sydney, Australia, 12-15 December 2000.

CONFERENCE PRESENTATIONS

Mansager, B., "A Combat Simulation Analysis of Autonomous Legged Underwater Vehicles," Second Joint Australian/American Conference on the Technologies of Mine Countermeasures, Randwick Army Barracks, Sydney, Australia.

Mansager, B., "The Utility of Fire and Forget Technology Demonstrated Using 1-meter Terrain," Sixty Ninth Military Operations Research Society Symposium, U.S. Naval Academy, Annapolis, MD.

BOOKS

M. J. Holler and G. Owen, eds., *Power Indices and Coalition Formation*, Boston (Kluwer), 2001.

CHAPTERS IN BOOKS

Owen, G., "Game Theory," *International Encyclopedia of the Social & Behavioral Sciences*, N.J. Smelser and Paul B. Baltes, eds., Pergamon, Oxford, pp. 5863-5868, 2001.